



ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

Ron Fuller, Chief Electrical Inspector

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● LAST CHANCE!!! ALL OPEN WINDOW OPPORTUNITIES END JULY 31, 2004

The “open window” opportunity for certain contractors and administrators ([WAC 296-46B-930](#)) and specific specialty electricians ([WAC 296-46B-950](#)) will end July 31, 2004. For details, see the June 2004 edition of this newsletter at: www.lni.wa.gov/TradesLicensing/Electrical/WhatsNew.

● SAFES (Strategic Action For Electrical Safety) Team Is Active Statewide

The department’s SAFES – Strategic Action For Electrical Safety team is doing compliance work in cities and towns around the state. In response to the concerns legitimate contractors have with the underground economy, these electrical compliance inspectors are focusing their efforts on finding unlicensed electrical contractors, uncertified electricians, and those who fail to obtain required electrical permits. The team has been very successful, issuing just over 300 citations in the targeted areas and over 60 referrals to other programs for violations of the general contracting, industrial insurance, and jobsite safety laws.

SAFES team members are working exclusively on compliance investigations and have no electrical inspection duties. Team supervisor, Jim Hinrichs, is willing to accept good referrals from contractors who are competing with firms and individuals operating out of compliance with the law. If you have verifiable information of unfair competition, illegal activities, or illegal work in progress you may contact Jim Hinrichs at (425) 290-1320. The team is based in the Everett L&I office, but is working across Washington. You will increase the chances of a successful investigation if you complete an *Electrical Inspection Witness Statement* (form [F500-087-000](#)) or *Investigation Report* (form [F500-076-000](#)) available on our Web site forms page at: <http://www.lni.wa.gov/TradesLicensing/Electrical/FormPub>

● Deadlines For Certification Renewals And Citation Appeals

Strict deadlines for certification renewals and citation appeals are written into the electrical laws. To avoid a late penalty fee or being required to take the exam again, certificate renewals must occur before the expiration date printed on the certificate. If you want to receive the department courtesy renewal notices as a contractor, administrator, electrician, or trainee, you must maintain a valid current address in our database. You can update this information with a [Request For Change Of Address](#) form available on the forms page at our Web site. Again, it is important to keep your address current in our database. The law requires the department to send penalty notices only to the “last address of record”.

Renewals one to ninety days late must pay a penalty fee.

Renewals ninety-one days late will not be processed. The applicant must retake the exam to obtain a new certificate. Excuses for late renewals are not accepted.

Citation/suspension appeals have a very strict twenty-day appeal timeframe. The twenty days is counted from the issue date on the official department letter and does include weekends, holidays, mailing time, etc. The twenty days is not counted by business days, or from the day you receive the notice, or the postmark date if you mail your appeal letter. Appeals received by the department more than twenty days from the issue date of the notification letter will not be allowed and the penalty will then become final. The courts have consistently applied this method of calculating the twenty-day appeal window. The twenty-day appeal window starts the day the notice is issued whether you receive it or not. If we have an old address for your record, it is possible you may receive a penalty and have the appeal window close, long before your mail catches up with you. The penalty will still be final and due.

● WAC Changes. Class B Installation Labels—Random Inspection Of Specific Work

Generally, only licensed electrical contractors can use the Class B basic electrical inspection random inspection process. Health care, large commercial, or industrial facilities using an employee who is a certified electrician(s) will be allowed to use this process only after requesting permission and receiving approval from the Chief Electrical Inspector. The conditions of use, the installation procedures, and the details of the limited (Class B) electrical work eligible for this random inspection may be found in WAC 296-46B-110(6-10). The two-part labels will be sold only in books of twenty. The printing will be completed by July 15th and quickly distributed to the local offices for sale.

● WAC Changes. WAC 296-46B-210(3) 012 Arc-Fault Circuit-Interrupter Protection

For the purpose of clarifying NEC 210.12(B) in requiring AFCI protection in dwelling unit bedrooms, this revision states that spaces accessed only through a bedroom, ancillary to the bedroom's function, and containing 15- and 20-ampere, 125-volt receptacle outlets are part of the "bedroom" circuits that must have AFCI protection. These spaces will include closets, sitting areas, and similar areas, but do not include bathrooms.

● WAC Changes. WAC 296-46B-334 Use Of Nonmetallic Sheathed Cable

The changes expand the use of Type NM cable. The rules allow Type NM cable in all one or two-family dwellings and other structures of Types III, IV, and V construction except as prohibited in NEC 334.12. In structures of Types III, IV, and V construction, other than one, two or multifamily dwellings, all cable(s) must be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies. The installer will be required to provide the inspector documentation substantiating the type of building construction and finish material rating(s) prior to any electrical inspection.

The building official will determine the International Building Code (IBC) type of construction classification for "other than one and two-family dwellings."

All electrical contractors and electricians should note that the WAC Technical Advisory Committee and the Electrical Board did not agree to a proposal to modify the (02) residential specialty electrician scope of work to allow (02) electricians to work in nonresidential occupancies. Although nonmetallic-sheathed cable may be used in buildings of up to five floors, the (02) is limited to one and two-family dwellings and multifamily dwellings not exceeding three floors above grade.

● WAC Changes. Continuing Education (CEU) Course And Instructor Approval

An Electrical Board decision (to delegate course and instructor approval to the department) and revisions of the electrical rules make significant procedural changes for CEU course sponsors and instructors. Now that the minimum requirements for course approval and instructor approval have been clearly defined in WAC 296-46B-970, separate applications and fees are required for courses and individual instructors. The approval for a course or instructor is valid for three years. Neither classes nor instructors will be renewed. At the end of the three-year period, course sponsors and individual instructors must submit a new application and demonstrate they continue to meet the minimum requirements.

Individuals that meet the instructor minimum qualifications by being employed and approved by a manufacturer of electrical products may only instruct classes sponsored by that manufacturer. Instructors properly approved under the other experience and technical qualifications in WAC 296-46B-970 may teach any approved course if a course sponsor finds them competent.

● Weatherproof Receptacle Covers On Construction Temporary Services

We have received comments from our customers, inspection supervisors, and electrical inspectors about the lack of durability of bubble-type weatherproof receptacle covers used on temporary service equipment at construction sites. The products manufactured today work well on fixed, permanent receptacles in residential, commercial, and industrial facilities, but do not hold up in the construction environment.

When bubble covers are broken, the receptacles are completely unprotected from the elements and potentially create a more hazardous condition.

Effective immediately, we will modify the interpretation published in the June 2003 ELECTRICAL CURRENTS newsletter. 15- and 20-ampere, 125- and 250-volt receptacles installed for temporary service equipment at construction sites, outdoors, in a wet location will be permitted to comply with NEC 406.8(B)(2)(b) that states, “A receptacle installed in a wet location where the product intended to be plugged into it will be attended while in use (e.g., portable tools, and so forth) shall have an enclosure that is weatherproof when the attachment plug is removed.” All covers approved for a weatherproof location, whether or not the attachment plug is inserted or removed, will be acceptable.

● You Must Have Your Electrician Or Training Certificate With You While Working

The law is very clear on this issue. It is not an option. [RCW 19.28.161](#) states, “No person may engage in the electrical construction trade without having a valid master journeyman electrician certificate of competency, journeyman electrician certificate of competency, master specialty electrician certificate of competency, or specialty electrician certificate of competency issued by the department in accordance with this chapter...All apprentices and individuals learning the electrical construction trade shall obtain an electrical training certificate from the department...Apprentices and individuals learning the electrical construction trade shall have their electrical training certificates in their possession at all times that they are performing electrical work.” [RCW 19.28.271](#) states, “It is unlawful for any individual to engage in the electrical construction trade or to maintain or install any electrical equipment or conductors without having in his or her possession a certificate of competency or a training certificate under RCW 19.28.161 through 19.28.271.”

You must properly identify yourself as a certified electrician or trainee to customers, contractors, building officials, electrical inspectors, or compliance inspectors. You are subject to citation if you do not have your certificate in your possession while working on the jobsite.

● Six-Foot Ground Rods Are Intended Only For Exempt Telecommunications Use

Be aware of the length of the ground rod you are purchasing. With the department’s emphasis on the proper installation of ground rods, ensure you are using the 8’ ground rods required by the National Electrical Code (NEC). Our own inspectors and our city electrical inspection partners report that electrical supply houses in their jurisdiction have a plentiful stock of 6’ ground rods for sale.

These less expensive electrodes are intended for telecommunications work on the exempt (upstream) side of the telecommunications demarcation point, and some electrical contractors are improperly using them to ground electrical systems. Installing a 6’ ground rod in an installation under the electrical installations requirements has the same citation penalty and possible suspension as cutting off an 8’ rod.

● Security Cameras—Are They Limited Energy Installations Or Not?

The department receives many licensing questions about the installation of security cameras. Fixed-in-place cameras powered by a nearby Class 2 plug-in transformer or by cord and plug directly from a 120-volt receptacle don’t need to be installed by certified journeyman or limited energy electricians.

However, technology is changing and the industry trend is to use a remote power supply panel (usually located in a secure “surveillance room”) to supply 24-volt circuits to surveillance equipment throughout a building. Power supply panels are listed and typically contain a Class 2 transformer, fuses rated 2 amps or less, and terminals for multiple 24 volt circuits.

It was never the intent of the telecommunications legislation to allow uncertified telecommunications workers to install limited energy power conductors (of any voltage level) throughout a building. A telecommunications worker may only supply telecommunication equipment from an adjacent limited energy power supply (e.g. a wireless alarm control panel or product identification radio transmitter).

This exclusion includes hybrid cables containing limited energy and data conductors. All limited energy circuits must be installed by an (01)-general or (06)-limited energy electrical contractor using certified journeyman or limited energy electricians.

● Facts About Specialties, Trainees, And Required Supervision

With the new emphasis placed on licensing, certification, and permit compliance at the request of our legitimate contractors and electricians, and the startup of the Strategic Action For Electrical Safety (SAFES) team activities in April (see the February 2004 edition of this newsletter), we want to ensure that accurate information on the compliance laws and rules is available. There are several widely held “myths” about supervision and specialty certification that need clarification.

The following myths are not true:

Myth #1: ***All trainees in their fourth year can work unsupervised half way through their last year.***

This status is only available to individuals enrolled in an approved electrical (journeyman) apprenticeship program or approved electrical construction trade (journeyman) training program. You must submit a special request through your apprenticeship/training director for this six-month, nonrenewable certificate and have it in your possession while working. (See [WAC 296-46B-965](#)(8) for details.)

Myth #2: ***Electrical trainees are allowed to work 2 hours (25%) anywhere without supervision each day and then go to a job site where supervision is provided.*** Supervision means that the certified electrician must be on the same job site as the trainee(s) for a minimum of 75% of each working day. The Electrical Board has previously ruled on this issue and determined that if a trainee is on a job site for 1 hour, then they must be under supervision on that site for not less than 45 minutes.

Myth #3: ***Specialty electricians are automatically trainees when they are working under supervision at tasks outside of their specialty scope.*** Specialty electrician certification only allows the individual to perform their specific specialty work without supervision and supervise trainees for a contractor with the same specialty (or “sub-specialty” scope of work crossover per WAC 269-46B, Table 920-1). When employed by any other type of electrical specialty contractor, a specialty electrician is a trainee and must have a current training certificate and work under proper supervision.

Myth #4: ***If I need work done that is outside of my specialty contractor scope of work and my specialty electrician employees, I can employ an (01) journeyman electrician and have him do the work for the company.*** The license and scope of work of the contractor is the limiting factor. When an (01) journeyman works for a specialty contractor they are working as specialty electricians and may not perform any electrical work outside the specific scope of their employer. If a contractor needs electrical work outside of their own scope, they must subcontract to another (appropriate) electrical contractor (see the August 2003 edition of this newsletter).

● Electrical Question of the Month

This Month’s Question: What is the mandatory marking required for all device and junction boxes (6 x 6 and smaller) in systems defined in the NEC as emergency systems? **A)** Permanently marked so they will be readily identified as a component of an emergency circuit or system, **B)** With an identification plate substantially yellow in color with letters, minimum ½” high, stating **EMERGENCY SYSTEM**, **C)** Painted inside and out substantially orange in color, **D)** Painted inside and out substantially red in color.

Last Month’s Question: A 16-foot rigid metal pole used to support a luminaire **A)** may be used as a raceway for the circuit conductors to the luminaire. **B)** must be provided with a minimum 2” X 4” access handhole near the base. **C)** must be provided with a grounding terminal inside the pole. **D)** all of the above. The answer is: **D)** [NEC 410.15(B)]